A STUDY OF THE RELATIONSHIP OF SOCIOECONOMIC STATUS AND SPECIFIED EDUCATIONALLY RELEVANT VARIABLES AMONG EMOTIONALLY DISTURBED CHILDREN

By

SUSAN C. ROBERTS

A DISSERTATION PRESENTED TO THE GRADUATE COUNCIL OF THE UNIVERSITY OF FLORIDA IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF DOCTOR OF PHILOSOPHY

UNIVERSITY OF FLORIDA
1972

Copyright by
Susan C. Roberts
1972

ACKNOWLEDGEMENTS

A study such as this could not have been conducted without the contributing efforts of many persons. Sincere gratitude is in order to Dr. William Reid, committee chairman, for his time, assistance, and suggestions. A special thank you is expressed to Dr. Lyndal Bullock, advisor and committee co-chairman, for his support, patience, and valuable recommendations. He carefully reviewed the manuscript many times and made constructive comments and significant improvements after each reading. A word of thanks is due to Dr. William Wolking and Dr. Harold Hunter, committee members, for their continuing interest and advice. The cooperation of the staff, faculty, and children at the Gateway School, Orlando, Florida is greatly appreciated. It would not have been possible to complete this study without the encouragement, understanding, and inspiration of my husband.

TABLE OF CONTENTS

ACKNOWLEDGEMENTS iii

LIST OF TABLES vii

ABSTRACT ix

CHAPTER ONE - THE PROBLEM. 1

Present Study. 4

CHAPTER TWO - REVIEW OF THE LITERATURE 5

Literature Pertaining to Normal Children 5

Socioeconomic Status and Intelligence. 5

Socioeconomic Status and Achievement 9

Socioeconomic status and reading achievement. 11

Socioeconomic status and arithmetic achievement. 13

Socioeconomic Status and Language. 14

Socioeconomic Status and Behavior. 17

Summary of the Findings Pertaining to Normal Children 21

Literature Pertaining to Emotionally Disturbed Children 22

Intelligence 22

Achievement. 23

Language 26

Behavior 27

Summary of the Findings Pertaining to Emotionally Disturbed Children 29

CHAPTER THREE - THE DESIGN 31
Definition of Terms. 31
Hypotheses 32
Null Hypothesis I. 32
Corollary a. 32
Corollary b. 32
Corollary c. 32
Corollary d. 32
Null Hypothesis II 32
Corollary a. 32
Corollary b. 33
Corollary c. 33
Corollary d. 33
Corollary e. 33
Corollary f. 33
Corollary g. 33
Corollary h. 33
Method 33
Limitations of the Study 35
Instrumentation. 35
Data Analysis. 39
Significance 40
CHAPTER FOUR - RESULTS 42
Discussion of the Findings by Hypotheses 46
Null Hypothesis I. 46
Corollary a. 46
Corollary b. 47
Corollary c. 48

Corollary d. 49
Null Hypothesis II 50
Corollary a. 51
Corollary b. 51
Corollary c. 51
Corollary d. 51
Corollary e. 51
Corollary f. 51
Corollary g. 52
Corollary h. 52
CHAPTER FIVE - CONCLUSIONS AND RECOMMENDATIONS . . 53
Conclusions. 53
Recommendations. 56
Recommendations for Classroom Teachers 56
Recommendations for Researchers. 57
REFERENCES 59
VITA 68

LIST OF TABLES

TABLE 1 - Distribution of Rating of Occupational Levels as Determined by the Revised Occupational Measure of the Warner Scale 42

TABLE 2 - A Comparison by Age Level of the Mean Scaled Scores Between the Present Sample of Children and the Standardization Population on Five Wechsler Intelligence Scale for Children Subtests: Information, Comprehension, Arithmetic, Picture Completion, Block Design 43

TABLE 3 - A Comparison by Age Level of the Mean Raw Scores Between the Present Sample of Children and the Standardization Population on the Peabody Individual Achievement Test . 44

TABLE 4 - A Comparison by Age Level of the Mean Raw Scores Between the Present Sample of Children and the Standardization Population on Four Illinois Test of Psycholinguistic Abilities Subtests: Auditory-Vocal Automatic, Auditory-Vocal Association, Auditory Decoding, Vocal Encoding 44

TABLE 5 - Intercorrelation Matrix Between Socioeconomic Status and Educationally Relevant Variables and Between Educationally Relevant Variables to One Another. 45

TABLE 6 - Distribution of Scaled Scores Obtained on Five Wechsler Intelligence Scale for Children Subtests: Information, Comprehension, Arithmetic, Picture Completion, Block Design 47

TABLE 7 - Distribution of Standard Scores Obtained on the Peabody Individual Achievement Test 47

TABLE 8 - Distribution of Scaled Scores Obtained on Four Illinois Test of Psycholinguistic Abilities Subtests: Auditory-Vocal Automatic, Auditory-Vocal Association, Auditory Decoding, Vocal Encoding 48

TABLE 9 - Degree and Distribution of the Following Behaviors as Measured by the Behavioral Dimensions Rating Scale: Aggressive/Acting Out, Withdrawn, Tense/Anxious, Irresponsible/ Inattentive. 50

Abstract of Dissertation Presented to the
Graduate Council of the University of Florida in Partial
Fulfillment of the Requirements for the Degree of Doctor of Philosophy

A STUDY OF THE RELATIONSHIP OF SOCIOECONOMIC STATUS AND SPECIFIED EDUCATIONALLY RELEVANT VARIABLES AMONG EMOTIONALLY DISTURBED CHILDREN

By

Susan C. Roberts

August, 1972

Chairman: Dr. William R. Reid
Co-Chairman: Dr. Lyndal M. Bullock
Major Department: Special Education

The purpose of the study was to determine whether the socioeconomic status of emotionally disturbed children in special public school classes is significantly correlated with their intelligence, achievement, language ability, and behavior. The sample consisted of 30 children, ages 7-1 to 10-6, enrolled in a special public school for the emotionally disturbed. The investigator administered the following instruments to each child: the Information, Comprehension, Arithmetic, Picture Completion, and Block Design Subtests of the Wechsler Intelligence Scale for Children; the Peabody Individual Achievement Test; and the Auditory-Vocal Automatic, Auditory-Vocal Association, Auditory Decoding, and Vocal Encoding Subtests of the Illinois Test of Psycholinguistic Abilities. The socioeconomic status of the children's families was determined with the revised occupational measure of the Warner Scale.

The classroom teacher completed the Behavioral Dimensions Rating Scale for each child. The four characteristics measured by this scale are aggressive/acting out, withdrawn, tense/anxious, and irresponsible/inattentive. Pearson Product-Moment correlations were computed between socioeconomic status and intelligence, achievement, language, and behavior and between the educationally relevant variables to one another. No cause-effect relationships were implied because correlations do not support inference of causality.

The children in the present sample were generally from lower class families on the basis of the occupational measure of the Warner Scale. They were also of significantly lower intelligence, achievement, and language ability than normal children at comparable age levels. Although no correlations significant at the 5 percent level of confidence were obtained between socioeconomic status and the educationally relevant variables, intelligence, achievement and language were positively related to socioeconomic status whereas the behaviors were negatively related to it. Highly significant positive intercorrelations were found between intelligence, achievement, and language and between aggressive/acting out, tense/anxious, and irresponsible/inattentive behavior. Significant negative correlations were obtained between age and achievement and between aggressive/acting out behavior and achievement. The behaviors were positively related to one another and negatively to intelligence, achievement, and language.

It was concluded that emotionally disturbed children are far behind their regular class peers in terms of academic performance and that they fall further behind as they progress through the elementary grades. This factor implies the importance of early identification and appropriate remedial instruction techniques with the disturbed school age population.

The significant negative correlation between aggressive/acting out behavior and achievement indicates that the higher the child's academic achievement, the less aggressive he tends to be. This implies the need for children to achieve and the possibility of utilizing achievement experiences as a means to eliminate inappropriate behavior. The vast ramifications of this concept for the efficient management of, and remediation procedures with, disturbed children so that they may function optimally in the regular educational mainstream are evident. Successful academic performance could become the major therapeutic technique used to ameliorate the behavior problems of emotionally disturbed children.

CHAPTER ONE

THE PROBLEM

The special education of children with emotional and social adjustment problems is a comparatively new dimension of the total public school movement. Research efforts to analyze the numerous classroom variables, teacher characteristics and nature and needs of the pupils in these programs are continuously growing in number, level of sophistication and significance for everyday classroom application. However, much intensive work must be done in order to bring the realm of knowledge regarding the education of emotionally disturbed and socially maladjusted children in line with that of regular education.

The social and psychological background factors pertaining to the learning characteristics of "normal" public school children have been thoroughly investigated over several decades. Of particular prominence has been the quantity of literature concerning the correlation between the socioeconomic status of a child's family and specified measures of educational attainment. Of greater significance has been the general consistency of the findings of such studies.

> In general, lower class children are more dependent upon the school in learning to read, write, and do arithmetic than are middle class children .... The same methods

> and materials will not teach most lower class children to read and write (Cohen, 1969, p. 8).

In contrast to this situation, no research to date has dealt with the correlation between the socioeconomic status of emotionally disturbed and socially maladjusted children in special public school programs specifically for these children and certain educationally relevant characteristics. Such data would have implications for educational programing and would be useful in determining the most effective techniques to produce the most satisfactory behavioral adjustment and the highest possible academic achievement.

Several investigations have been made of populations similar to the one mentioned above. Harris (1961) compared 200 boys who had been referred to the Illinois Institute for Juvenile Research. One hundred had been referred primarily for learning problems and the other 100 had been referred primarily for reasons such as bedwetting, nervousness, and difficulty in making friends. Both groups of boys, ages 7-16, were considered to be emotionally disturbed and were of at least average intelligence. Harris observed that learning difficulties were significantly related to low socioeconomic status.

White and Charry (1966) defined school disorder as learning difficulties, social difficulties, emotional disturbances, deviant or antisocial behavior, or any combination thereof. Their subjects were pupils referred

for the first time to the school psychologist during the 1962-1963 school year. They studied 2866 such elementary school pupils in contrast to the total school age population of 95,000 of Westchester County, New York. They found that their sample: (a) was representative in socioeconomic status of the total population, (b) was judged to be of lower intelligence on the basis of combined group intelligence quotient (IQ) scores, (c) showed a correlation between socioeconomic status and IQ of .41, (d) had a ratio of lower to upper achievement levels of 3:1, and (e) showed a peak of referrals in grades K-3 and in the age range of six to ten years.

"Action selectivity" was defined as variables operating in the chain of actions of school referral that would result in subpopulations created by the actions, that would in turn lead to differential action at the end of the chain. The school staff as compared to the parents referred a group lower in IQ, socioeconomic status, and achievement, and composed of more males. Action selectivity appeared to be operating before the pupils entered the chain of actions, in the choice of procedures for diagnosis in the diagnostic impressions, and at the end in terms of recommendations. "It appeared as though a hierarchy emerged, based upon variables relevant to school performance ... in which the cream got mental health services, and the buttermilk got educational services" (Cohen, 1969, p. 81).

Goldstein, Cary, Chorost, and Dalack (1970) studied

94 boys, ages 6 to 12, referred by their teachers for placement in classes for emotionally disturbed children in the Syracuse public schools. Socioeconomic status was found to be related positively to intelligence, achievement test scores, and report card grades in reading and arithmetic. The correlations of father's occupation and education taken separately suggested that occupation was the more important variable.

Present Study

The purpose of the present study was to determine whether the socioeconomic status of children already placed in special public school classes for the emotionally disturbed children is significantly correlated with their intelligence, achievement, language ability, and behavior. Individual assessment of each of these variables will be made by the examiner or classroom teacher for each of the subjects. Results will provide valuable information as to whether or not the educational needs of emotionally disturbed children from different socioeconomic levels can be met utilizing identical methods and programing for all, or whether these must be varied to a certain extent depending upon the socioeconomic backgrounds of the children.

CHAPTER TWO

REVIEW OF THE LITERATURE

The review of the literature will be divided into two major sections: literature pertaining to normal children and literature pertaining to emotionally disturbed children. The former will be further subdivided into socioeconomic status and each of the following: intelligence, achievement - reading and arithmetic, language, and behavior. The latter will be further subdivided into intelligence, achievement, language and behavior. The latter section will contain research involving socioeconomic status, whenever possible, and also relevant studies of juvenile delinquents.

Literature Pertaining to Normal Children

Socioeconomic Status and Intelligence

An overwhelming majority of the literature lends support to the hypothesis that children's intelligence quotients correlate positively with the socioeconomic status of their families. In reviewing 97 studies, Loevinger (1940) found an average correlation of .40 between test intelligence of children and the occupational level of their fathers. Over 20 years later, Hunt (1961) stated that a varied environment and a variety of stimuli during early development, conditions more likely to be found in middle-class than in lower-class

homes, are conducive to higher utilization of a child's intellectual potential than impoverished and monotonous environments.

Maddy (1943) studied 319 sixth-grade pupils. Her results showed a reliable difference in intelligence of children from differing occupational groups. Children from homes of professional families averaged 16.1 points in intelligence above children from semi-skilled families. She also noted that whereas children of professional families living in economically poor neighborhoods had slightly lower intelligence scores than the average of the professional group, the reverse was true for children of semi-skilled families living in wealthier areas.

Sewell and Ellenbogen (1952) found highly significant relationships between children's mean measured intelligence on the California Short Form Test of Mental Maturity and social status as measured by father's occupational level, parents' educational attainment level, and the prestige of the family in the community. This was the case for all public and parochial elementary school children in a Wisconsin county for urban, rural-nonfarm, and farm families.

> To the writers this constitutes unmistakable evidence that social status differentials in measured intelligence exist within the urban, rural-nonfarm and farm components of the population of a predominantly rural county (p. 616).

Few significant differences were found when the mean measured intelligence of children in the same relative categories of social status was compared across population groups.

> These findings are further evidence that the intelligence differentials are not primarily associated with residence, but are more properly considered to be related to social status (p. 616).

Estes (1953), in studying 80 children, 40 of upper and 40 of lower socioeconomic status, reported that intelligence scores on the Wechsler Intelligence Scale for Children (WISC) vary with socioeconomic level in respect to magnitude; that is, the upper socioeconomic group was superior to the lower socioeconomic group. Heber (1956) reported that children who show considerable deviation in IQ from the group also deviate in social status in the same direction as the IQ deviation.

Laird (1957) compared the WISC performance of 60 elementary school boys from professional and semi-skilled families. She found greater differences in scores on the Verbal and Full Scale than on the Performance IQs.

> One can be fairly certain that in Full Scale IQs the two groups differ in intelligence classification, the P group being classified as 'Bright Normal' and the S group as 'Average." Therefore, it seems necessary to refute the hypothesis that two groups of boys, drawn from two different socio-economic levels, will show similar performance on the WISC if they are similar in age, residence, school attendance, family unit, race, nationality, physical status and health (p. 105).

Two further studies led to similar conclusions. Schmuck and Schmuck (1961) found children's intelligence scores to correlate positively with father's occupational level. Anderson (1962) reported that the Lorge-Thorndike yields scores which are highly related to the social class of the

pupil's family. Higher social status is associated with higher mean IQs on both verbal and non-verbal factors of the test. There was no evidence that pupils of lower class status are more effective on non-verbal than verbal items.

Schwebel and Bernstein (1970) studied the effects of impulsivity on the performance of 18 lower class boys on four WISC subtests: Similarities, General Comprehension, Block Design, and Mazes. Measurement was made under two conditions of test administration, the standard one and one in which an imposed latency period was included. The boys generally did better in the latter condition. The authors concluded that impulsiveness can significantly affect performance on intelligence tests.

Several studies examined other factors pertinent to socioeconomic status and intelligence. Reid and Schoer (1966) surveyed 87 male fourth-graders whose IQs were between 90 and 110. All were assigned to upper, middle or lower class socioeconomic status based on the education and occupation of the head of the household. Reading achievement was determined by the administration of the Iowa Test of Basic Skills. The scaled scores on the subtests were the criterion measures used in the data analysis. For both the Verbal and Performance scales separately, the main effect for social class was not significant nor were any interactions involving social class. Reading achievement was found to be significantly related to scores on three Verbal Scale Subtests and one Performance Scale

Subtest: Arithmetic, Similarities, Digit Span, and Picture Completion, respectively.

Chase (1970) found that,among fourth-, fifth-, and sixth- graders, children from different socioeconomic classes, who get the same scores on the Otis Level Beta Form EM, tend to answer the same items. Burnes (1970) compared black and white boys from lower class and upper-middle class homes to determine group patterns on the WISC. Lower class subjects of both races obtained significantly lower subtest scores. A few differences in the patterns were found between socioeconomic groups, but not between races.

Mitchell (1956) compared the factorial structure of cognitive functions for high and low status groups. Essentially the same factors were identified for both groups: Number, Verbal Meaning, Space, Word Fluency and a General Test factor for which all the general ability tests had high loadings. However, the organization of mental abilities was found to be much less differentiated for the low status group.

Socioeconomic Status and Achievement

An investigation of the relationship between socioeconomic status and achievement reveals that the findings of studies done 25 and 30 years ago have been reconfirmed many times in more recent work. A definite correlation between the two variables has been shown to exist.

Shaw (1943) studied 280 pupils in the fourth through eighth grades in the Sheldon, Iowa Public Schools. He found a correlation of .41 between scores on the Sims Score

Card (a measure of socioeconomic status) and Stanford Achievement educational quotients (EQs). The correlation between average grade and Sims Score Card was .38. With tested intelligence partialed out, a coefficient of .27 was obtained between Sims Scores and EQs. "On the whole, evidence is obtained of a fairly substantial relationship between socio-economic status and academic achievement" (p. 200).

Havighurst and Janke (1944) surveyed all the ten-year-old children in a midwestern community. Their instruments were the Stanford-Binet, Wechsler-Bellevue, Iowa Silent Reading, Minnesota Paper Form Board, Minnesota Mechanical Assembly (modified) and Chicago Assembly Test for Girls. They reported that despite occasional individual deviations from group patterns, children of higher family social status tended to do better on all of the tests than children of lower social position. Children from the lowest social class were lower in all the abilities measured.

Gough (1946) studied 127 sixth-grade public school children in Minnesota. His correlations between status and achievement test scores were clustered near .30, except in arithmetic where the correlation was .07. He concluded that in his sample socioeconomic status had a slight positive relationship to academic achievement.

Curry (1962) reported that as intellectual ability decreases, the effect of economic and social conditions on scholastic achievement increases greatly. His observations were based upon investigation of 360 sixth-grade British children.

McDermott, Harrison, Schrager, and Wilson (1965) observed that among blue-collar families, twice as many of the children from the skilled group were doing "well" or "very well" academically; whereas twice as many of the children from the unskilled group were doing "very poorly" or "failing." Miller (1970) has stated that environmental conditions which seem to retard children's school achievement tend to be more associated with lower occupational categories than with higher ones.

Socioeconomic status and reading achievement. Milner (1951) found that among first-grade children higher reading ability is related to higher family social status and lower reading ability is related to lower family social status. A Pearson correlation of .86 was obtained between the family's Index of Social Characteristics and language IQ as measured on the California Test of Mental Maturity.

Granzow (1954) compared underachievers, normal achievers, and overachievers. He concluded that underachievers in reading come from homes of lower socioeconomic status. Children from lower socioeconomic environments have a higher incidence of reading disabilities than do children from higher socioeconomic backgrounds (Pasamaneck & Knoblock, 1958; Sexton, 1961; Buder, 1966).

Hill and Giammatteo (1963) reported a high correlation between socioeconomic level and reading achievement. The means for the status groups on the Iowa Test of Basic Skills showed that the high socioeconomic group by grade three is

eight months ahead of the low group in vocabulary achievement. In reading comprehension achievement the range between groups was nine months. The individual areas of reading when related to socioeconomic status showed 62 out of 64 subtests areas favoring children from the high socioeconomic group. Lovell and Woolsey (1964) found that social class affects reading attainment when the whole range of reading ability is considered.

Chandler (1966) did a comprehensive review of the literature on reading disability and socioeconomic status. He concluded that although there is a good indication of a definite relationship between these variables, several "significant" questions will have to be answered before some of the socially oriented correlates of reading disability can be resolved. For example, "Isn't the IQ test basically an achievement test?" and "Could not socially disadvantaged children have the ability to learn and yet show up poorly on standardized tests" (p. 19)?

Mortenson (1968) administered the Clymer-Barrett Pre-Reading Battery to 1500 first-graders and found that differential performance on pre-reading discrimination tasks was closely associated with socioeconomic background; however, it could not be attributed entirely to any one occupational level within a particular socioeconomic level. Mortenson interpreted his results to imply that no single pre-reading program is appropriate for children from all socioeconomic classes. Children from the lower levels need a great deal

of practice in visual and auditory discrimination, but experiential background physical and emotional health and general interest in learning to read are some of the other factors which need to be assessed in order to plan individual programs of reading instruction.

Further evidence of the significant correlation between socioeconomic status and reading achievement was presented by Hanson and Robinson (1967) with first-, second-, and third-graders; and Oakland (1969) and Miller (1970) with first-graders.

Socioeconomic status and arithmetic achievement. Unkel (1966) studied 918 children in grades one to nine in the Syracuse and Worcester public schools. In general, the arithmetic achievement of children of comparable mental ability was affected by socioeconomic status, with the pupils in the high socioeconomic group attaining the highest achievement and pupils in the low group attaining the lowest level of achievement.

Montague (1964) found a significant difference in scores made on an inventory test of arithmetic concepts between kindergarten children of high and low socioeconomic status. Pattison and Fielder (1969) gave a test which was especially devised to measure the underlying concepts of numbers as opposed to the ability to remember number names. Among the 114 children ages five years to six years and five months, those from middle class backgrounds scored significantly higher than those from the lower class. The authors

believed that their data make " ... it reasonable to conclude that children from varying socioeconomic levels will need varying instructional activities during the kindergarten year" (p. 83).

Hill and Giammatteo (1963) found a full six-month difference in arithmetic skills and an eleven-month difference in problem-solving ability among 223 third-graders of high and low socioeconomic status. A comparison of the effects of two arithmetic teaching methods on 1800 third-graders of different socioeconomic levels was made (Passy, 1964). There were significant differences at the .05 level between the various socioeconomic groups regardless of which program of instruction was used.

Additional support of the hypothesis that there is a positive relationship between arithmetic achievement and socioeconomic status was given by Keough (1960) in his study of eighth grade students and Cleveland and Bosworth (1967) in their work with sixth-graders.

Socioeconomic Status and Language

Several different facets of the concept of language have been examined with respect to socioeconomic status. Templin (1957) in a study of 480 children between the ages of three and eight found that test scores on oral vocabulary of high socioeconomic children were superior to those of low status children. Hill and Giamatteo (1963) reported a correlation of .84 between vocabulary scores and socioeconomic rating.

In studies investigating the structural components of spoken language used by children of differing socioeconomic backgrounds, the syntactical organization of standard English in low socioeconomic status children was generally found to be inferior to that of the higher status children (McCarthy, 1954; Loban, 1963; Deutsch, 1963). Maturity of sentences and greater length and variety of expression at earlier ages was characteristic of higher socioeconomic status children (Deutsch, 1963; Burnes, 1970). It has also been found that the culturally disadvantaged child's lack of oral communication competency in standard English tends to become greater with age (Deutsch & Brown, 1964).

Fifty middle class and 50 lower class black kindergarten boys were administered a battery of eight instruments designed to assess specific information processing abilities (Ryckman, 1967). The major differentiating characteristic was found to be general language ability. It has also been stated that the intellectual development of middle class children is a function of their greater linguistic ability (Bernstein 1960, 1961).

Worley and Story (1967) studied 40 first-graders to determine to what degree children of low socioeconomic status differ from those of high socioeconomic status. The difference in language facility as measured on the nine subtests of the Illinois Test of Psycholinguistic Abilities (McCarthy & Kirk, 1961) was significant beyond the .01 level of confidence. A mean difference of 14 months was found between the high and low status groups.

Howard, Hoops, and McKinnon (1970) investigated the effect of socioeconomic status upon selected communication skills of 198 kindergarten children. A portion of the Pre-School Inventory and four subtests of the ITPA were administered on an individual basis. The Auditory-Vocal Automatic, Auditory-Vocal Association, Auditory Decoding, and Vocal Encoding subtests were chosen, because collectively they seem best to assess the ability of a child to organize, understand, and express his ideas about familiar objects and situations in a meaningful way (McCarthy & Kirk, 1961). Significant differences between the high and low socioeconomic groups were found on the Auditory-Vocal Automatic and the Vocal Encoding subtests. However, even on the other two subtests, the lower the socioeconomic status, the lower the score. The relative pattern of ability remained consistent.

Uhl and Nurss (1970) investigated socioeconomic level styles in solving reading-related tasks of 211 second-grade children in Atlanta. For the upper-middle socioeconomic level (SEL) children the ITPA was largely a measure of vocabulary; whereas for the low SEL children it measured a combination of immediate memory and vocabulary. The greatest similarity between the two SEL groups was in the visual factor and the greatest difference in the language factor. The authors hypothesized that the low level of language functioning and the non-standard American dialects of the SEL Southern children appeared to have hindered their performance in several areas. This has implications for the teaching of reading.

Socioeconomic Status and Behavior

Over the years a variety of populations has been sampled in order to ascertain the relationship between socioeconomic status and behavior characteristics. Fifty children from homes of high socioeconomic status who had been referred to the Washington Child Guidance Clinic were compared to a control group of 50 children from dependent homes from the same source (Pisula, 1937). Some of the outstanding differences between the two groups were that the former showed more school maladjustments, more problems based on "submissive" traits, fewer problems based on "aggressive" traits, and about an equal number of "faulty habit" problems.

Maddy (1943) found that children from professional homes scored higher on dominance, extroversion, and emotional stability. Whereas the girls of the semi-skilled families rated consistently lowest, among boys the only reliable difference was on extroversion. Differences on attitude tests showed a tendency for the children of semi-skilled workers to have a greater number of worries than children of the professional group.

Kvaraceus (1944) compared the parents of 761 juveniles referred to the Passaic Children's Bureau with parents in the community with regard to occupations. Significantly fewer parents of the sample population were earning a living in the professions, by working as proprietors, clerks, sales personnel and craftsmen. Significantly larger proportions

were factory employees, W.P.A., other laborers, and domestic servants.

Heintz (1949) studied 222 eighth-graders at Rochester Junior High School in Minnesota. Class status was measured on the Sims Score Card Form C, adjustment was measured on the Symonds-Block Student Questionnaire, and intelligence on the Terman-McNemar Test of Mental Ability Form C. Heintz reported that the relationship of status to adjustment was definite. Although the differences between classes were not statistically great, the direction of this relationship was always the same. " ... the chances are that the lower class youngster will have more difficulty in adjusting himself to curriculum, the social life, and the administration" (p. 291). He will have somewhat less of a chance of adjusting normally to his teachers and fellow pupils.

Phillips (1962) found first and second order interactions between sex, social status and anxiety with regard to achievement among adolescents. Burchinal, Gardner, and Hawkes (1958) worked with a sample of 256 elementary school children from Iowa, Ohio, Kansas, and Wisconsin. The Rogers Test of Personality Adjustment was administered and socioeconomic status was based upon father's occupation and educational level of fathers and mothers. Significant differences were found among the children's total adjustment scores with children from higher levels being better adjusted. Personality inferiority means were also significantly different in the same direction. In eight of the other analyses

of children's mean scores where the differences were not significant, the ranking of the means was in the same direction as the significant differences. Father's occupation proved to be the best indicator of expected adjustment.

Additional evidence was found by Sewell and Haller (1959) among 1462 fourth- through eighth- grade children to the effect that those of lower class status rank somewhat below middle and upper status children on personality tests.

Aggression appears to be found more often among lower class children. According to Goldstein (1955):

> In low socio-economic areas it is likely that many of the child's needs will be thwarted or only partially met. In some underprivileged homes where there are working parents, crowded living conditions, poor diets, unhealthy play conditions, etc., it is not possible to meet all of the child's needs which are necessary for healthy growth. In an attempt to have these needs satisfied the child often adopts a more destructive type of aggression as part of his behavior pattern, resulting very often in anti-social behavior ... children living in a low socio-economic neighborhood are more likely to have greater feelings of hostility then children from other neighborhoods (p. 21).

McKee and Leader (1955) in studying 112 three- and four-year-olds of low and middle socioeconomic status found that aggression, defined as intent to injure one's peer, is more common among the lower middle class groups. In a study of third-graders in an entire county encompassing the full range of socioeconomic groups, Toigo (1965) found a weak but significant relationship between social status and aggression at the individual level. In general, the children from families of lower status exhibited higher levels of aggression. A weak relationship was also observed

between the classroom status level and its characteristic level of aggression. Again, the relationship was in a negative direction. Furthermore, " ... the lower status children appeared to be the major factor contributing to the overall trend noted when both status and aggression were examined with respect to the classes as statistical units ..." (p. 259). Among lower status children, the greater the concentration of them, the more aggressive they were. However, among upper status children, the greater the proportion of lower status children, the less overall aggression they displayed.

Three additional findings with regard to social class and factors affecting behavior are noteworthy here. Hollingshead and Redlich (1958) reported that lower class children are usually sent to psychotherapy by educational, law enforcement, or some other form of authority, whereas middle and upper class families usually brought their children for treatment voluntarily. Furthermore, McDermott et al. (1965) in surveying 263 children evaluated at the University of Michigan's Children's Psychiatric Hospital found that those from unskilled families were seen as presenting a significantly greater problem in school; however, referrals for professional treatment were made at later stages than for children from skilled families. Westman, Rice, and Berman (1967) did a follow-up of 130 nursery school children of middle socioeconomic backgrounds. Of these youngsters, 78 percent who showed low early adjustment

later sought mental health services. The authors attributed a high correlation between low high school adjustment and the use of mental health services to the strong relationship between academic and emotional adjustment.

Finally, Baker and Wagner (1965) did a thorough review of the literature pertaining to the relationship of socioeconomic status and mental illness in children. Their closing words are:

> ... the pattern of distribution, the pathways for perpetuation and the possibilities for the proliferation of mental illness among the different social classes, may prove disturbing to many readers, especially those who have battened on the popular notions that 'mental illness respects no social boundaries' and 'intelligence has nothing to do with mental illness.' Obviously such views are in need of factual reconstruction; for indeed not only are there class-related distributions of total cases but in addition lower classes ... are stricken in the main by more serious forms of psychopathology (psychoses), whereas the upper classes, when afflicted, demonstrate the milder forms (neuroses) in most cases (p. 535).

Summary of the Findings Pertaining to Normal Children

An extensive review of the literature regarding the relationship between socioeconomic status and certain specified educationally relevant variables has revealed the following:

1. There appears to be a positive correlation between socioeconomic status and intelligence.
2. There appears to be a positive correlation between socioeconomic status and both reading and arithmetic achievement.

3. There appears to be a positive correlation between socioeconomic status and language ability.
4. Lower class children tend to show more anxiety toward school and tend to be more aggressive than middle class children.

These observations have been made following the investigation of many different samples utilizing numerous different instruments. The correlations have often been found to be not only positive but also significant. The implications of the findings for the instruction of children from varying socioeconomic levels have been spelled out by several of the authors.

Literature Pertaining to Emotionally Disturbed Children

Very few studies to date have dealt with the socioeconomic status of emotionally disturbed children. The literature in this section will therefore pertain primarily to the educationally relevant variables: intelligence, achievement, language, and behavior patterns.

Intelligence

When the Wechsler Intelligence Scale for Children has been used with emotionally disturbed children to measure intelligence and to determine achievement levels, verbal and performance scores have been compared. Foster (1959) found upon testing 44 delinquents with a mean age of 15 that their performance IQ (PIQ) was 98.3 compared to a Verbal IQ (VIQ) 96.3. This difference was not significant. Fisher (1961) observed that mean PIQ was significantly greater than mean VIQ in white and Mexican American, but not black adolescent sociopaths. He states that most authors in discussing their conflicting results feel that the other investigators had not used enough rigor in their criterion of sociopathy.

Camp (1966) examined the relationship between electroenceph alographic (EEG) status and intelligence test performance (WISC scores) of 139 nondefective, acting out and delinquent children. The girls tested did not differ significantly from the standardization population but the boys showed a significantly larger proportion with PIQ VIQ than the standardization population. There were no significant differences for either sex in groups with abnormal EEGs and those with normal and borderline EEGs. Turner, Mathews, and Rachman (1967) reported that the retest reliability of the WISC is satisfactory when used with psychiatric groups.

Two studies have been done using short forms of the WISC with emotionally disturbed children. Enburg, Rowley, and Stone (1961) reported that a few subtests of the WISC may be used to assess the intellectual functioning of emotionally disturbed children without greatly reducing the reliability of the obtained quotient. When the number of subtests was increased, the correlated values obtained were also increased.

The WISC records of 147 emotionally disturbed children ages 6-0 to 15-11 with a Full Scale of 70 to 148 were rescored according to an abbreviated schedule (Yudin, 1966). Correlations between this form and the full administration ranged from .76 on Picture Completion to .94 for Block Design. The correlations for the Verbal, Performance and Full Scale IQs were .95, .93, and .97, respectively.

Achievement

Several studies have been done to determine achievement

levels of emotionally disturbed children. It has generally been found that these youngsters score higher in reading than in arithmetic and that their achievement levels in both subjects are below expectations when chronological and/or mental age are used as bases for making such judgments (Tamkin, 1960; Stone & Rowley, 1964; Roberts, Bullock, & Brown, submitted for publication, 1972).

Shimota (1964) found almost one-third of a sample of 74 hospitalized disturbed adolescents disabled in reading when reading disability was defined as tested skill 25 percent or more below grade expectation based on age and IQ. However, Motto and Lathan (1966) reported that children who remained in a hospital school in excess of ten months benefitted from their educational experience at the level expected for their mental ages, while those who attended for shorter periods of time did not.

Wolf (1965) compared children diagnosed as functionally emotionally disturbed with their siblings. No significant differences in scholastic grades were observed, although the disturbed group received significantly lower effort grades. Only neurotic and personality disordered children were included in this study.

Robins (1966) traced the adult social and psychiatric outcomes of 524 child guidance clinic patients and compared them with the adult social and psychiatric status of 100 normal school children of the same age, sex, neighborhood, race and IQ. "The clinic group had a very low level

of school achievement, even considering the low socio-economic status from which they came" (p. 28). The child's own behavior, his father's sociopathy and alcoholism, and the family breadwinner's occupation best predicted how far children went in school.

Literature concerning the academic achievement of juvenile delinquents has shown consistent findings. "If we do not help the 'deprived' 6 year olds likely to encounter reading problems, we may end up with delinquent 15 year olds ..." (Havighurst, 1959, p. 55). This statement implies the need for early identification of the deprived child followed by a special program for him to teach the "mastery of the art of reading" (p. 55).

Research by Margolin, Roman, and Harari (1955) suggested that 7500 children appearing in court yearly were in need of specialized remedial help. In order to go about this they suggested that:

> First, children with learning difficulties must be identified and aided long before their maladjustment in school results in a well-established pattern of truancy and subsequent delinquency. Second, the schools must recognize that children from low socioeconomic environments are basically different from middle-class children. This means that we cannot expect them to learn in the same manner as the middle-class child nor with the same curriculum (pp. 34-35).

Dinitz, Kay, and Reckless (1957) compared potentially delinquent with potentially nondelinquent boys on intelligence, reading and arithmetic achievement.

> The authors suspect that negative attitudes towards school and other social institutions may account for the poorer showing of potentially delinquent boys ... at this threshold

> age for involvement in official delinquency in American cities, namely twelve years or sixth grade in school (p. 136).

Pupils living in the more desirable census tracts scored significantly lower on delinquency indices but significantly higher on IQ and school achievement measures.

Language

A review of the literature in this area reveals two studies having implications for educational programing for children with emotional problems. An intervention curriculum was designed to initiate six youngsters at the Wiltwyck School for Boys into methods of learning in schools (Minuchin, Chamberlain, & Graubard, 1967). All the subjects were of the lowest social class as defined by Warner and had been placed at the center for aggressive and antisocial behavior. Ten sequentially arranged lessons focused on communication and clarifying the process and mysteries of the classroom. As a result of the program, the children's attention span increased and the quality of their verbal replies improved; however, these effects diminished as time passed without special help. The authors state:

> ... (1) that between the ages of 10 and 12 the cognitive communicative style of these children could be reversible, (2) that educational remedial intervention with this population could be carried successfully with children much older than 4 years, and (3) that we should study changes over a period of time before assuming that they are integrated in the child's new way of learning (p. 558).

Graubard (1967) studied 35 children who had been placed

by the court in a residential treatment center for anti-social behavior. Most of their families received public assistance and had two or more children who had been involved in some type of delinquent behavior. Normal intelligence was established through administration of the WISC and reading achievement at one year below expectancy through administration of the Metropolitan Achievement Test. The ITPA was then given because reading was viewed as a communication process. Most of the deficits were in the integrational area and in the visual motor channel. "The deficit at the Auditory Vocal Automatic was quite marked and could profoundly influence reading specifically and school in general" (p. 365).

Behavior

According to Haring (1963):

> The emotionally disturbed child is one who, because of organic and/or environmental influences, chronically displays: (a) inability to learn at a rate commensurate with his intellectual, sensory-motor and physical development; (b) inability to establish and maintain adequate social relationships; (c) inability to respond appropriately in day-to-day life situations; and (d) a variety of excessive behavior ranging from hyperactive, impulsive responses to depression and withdrawal. Although there are varying degrees of the above behavioral dimensions in emotionally disturbed children, the key to the eventual diagnosis of this condition is the chronicity of these symptoms (p. 291).

Clusters of behaviors displayed by emotionally disturbed children have been identified in several studies. Peterson (1961) took teacher ratings of 58 clinically frequent problems for 831 kindergarten and elementary school

children. Four factor analyses revealed a tendency to express impulses against society which was called "conduct problem," and a variety of elements suggesting low self-esteem and social withdrawal referred to as "personality problem."

Morse, Cutler, and Fink (1964) did a survey of public school classes for emotionally disturbed and socially maladjusted children throughout the United States. As part of this study teachers were given a list of 140 behavior descriptions and were asked to check the items reflecting the problems of each pupil. Then they were to rank each child's most severe problems. The most frequently occurring problems as viewed by classroom teachers were: lacks self-confidence, unable to concentrate, needs prodding, feels inferior, poor self-control, and argues. The next nine behaviors in order of total frequency of mention were: easily upset, short attention span, teases, fearful, disorganized in work, angers easily, defiant of authority, restless, and blames others.

Quay, Morse, and Cutler (1966) reviewed a number of studies in which Peterson's (1961) behavior rating scale had been used. Three factorially independent dimensions accounted for about two-thirds of the variance of the interrelationships among the problem behaviors. Quay, Morse, and Cutler used Peterson's scale on the data from the 441 children in the Morse, Cutler, and Fink (1964) survey. Three factors rotated accounted for 76 percent

of the variance. Factor one was the conduct problem or unsocialized aggressive dimension, with the largest loadings on behaviors such as defiant, uncooperative, boisterous, etc. Factor two, inadequacy-immaturity, loaded on sluggishness, laziness, inattentiveness, etc. Factor three, personality problem, was composed of behaviors such as inferiority feelings, fearfulness, depression, etc.

> The fact that, in the present group of children, the inadequacy-immaturity dimension accounted for a relatively greater proportion of the variance than is usually the case suggests that children displaying these behavioral characteristics are perhaps more likely to find their way into special classes than are children whose behavior is more anxious and withdrawn .... Despite a lack of overt aggression, such children are less able to function in a regular classroom than are the more neurotic children (p. 300).

Bullock and Brown (1972) identified four factors as being representative of behaviors exhibited by emotionally disturbed children in special public school classes.

> Factor I is best described as aggressive/acting out. The behavior pattern represented by this factor is one of fighting, threatening and generally, socially aggressive behavior. Factor II represents a behavioral pattern characterized best as withdrawn. Typically this individual plays alone, is shy, timid, self-conscious, reluctant and passive. Factor III is a representation of a tense/anxious pattern of interaction with no other concomitant problems. Factor IV represents an irresponsible/inattentive pattern of interaction related to rule breaking which may account for an individual's inability to meet situational expectations (pp. 32-33).

Summary of the Findings Pertaining to Emotionally Disturbed Children

An extensive review of the literature regarding certain specified educationally relevant variables has

revealed the following:

1. The WISC is a reliable instrument for use with emotionally disturbed children.
2. When considering either mental age or chronological age, reading and arithmetic achievement levels are below expectation.
3. Deficits have been found in the language ability of juvenile delinquents in residential settings.
4. No studies have been done to determine the language ability as measured by the ITPA of emotionally disturbed children in special public school classes.
5. Clusters of behavior patterns exemplified by emotionally disturbed children have been identified.
6. No studies have investigated socioeconomic status of emotionally disturbed and socially maladjusted children in special public school classes and its relationship to intelligence, achievement, language ability, and behavior.

CHAPTER THREE

THE DESIGN

Definition of Terms

Emotionally disturbed children - children who have been placed in special public school classes for the emotionally disturbed on the basis of educational and medical diagnoses.

Socioeconomic status - the social and economic level of a family as derived from the occupational measure of the Index of Status Characteristics.

Intelligence - the level of intellectual functioning of a child as measured by the combined Scaled Score of five of the Wechsler Intelligence Scale for Children subtests: Information, Comprehension, Arithmetic, Picture Completion, and Block Design.

Achievement - the level of academic attainment as measured by the Peabody Individual Achievement Test (PIAT) subtests: Mathematics, Reading Recognition, Reading Comprehension, Spelling, and General Information.

Language Ability - a child's skill in organizing, understanding and expressing his ideas about familiar objects and situations as measured by the Auditory-Vocal Automatic, Auditory-Vocal Association, Auditory Decoding and Vocal Encoding Subtests of the Illinois Test of Psycholinguistic Abilities.

Behavioral Characteristics - a child's tendency to be aggressive/acting out, withdrawn, tense/anxious, or irresponsible/inattentive as measured by the Behavioral Dimensions Rating Scale.

Hypotheses

Null Hypothesis I

H_o: There is no significant relationship between the socioeconomic status of emotionally disturbed children and specified educationally relevant variables.

Corollary a. There is no significant relationship between the socioeconomic status of emotionally disturbed children and intelligence.

Corollary b. There is no significant relationship between the socioeconomic status of emotionally disturbed children and achievement.

Corollary c. There is no significant relationship between the socioeconomic status of emotionally disturbed children and language ability.

Corollary d. There is no significant relationship between the socioeconomic status of emotionally disturbed children and behavioral characteristics.

Null Hypothesis II

H_o: There is no significant relationship among emotionally disturbed children between specified educationally relevant variables.

Corollary a. There is no significant relationship among emotionally disturbed children between intelligence and achievement.

Corollary b. There is no significant relationship among emotionally disturbed children between intelligence and language ability.

Corollary c. There is no significant relationship among emotionally disturbed children between intelligence and behavioral characteristics.

Corollary d. There is no significant relationship among emotionally disturbed children between achievement and language ability.

Corollary e. There is no significant relationship among emotionally disturbed children between achievement and behavioral characteristics.

Corollary f. There is no significant relationship among emotionally disturbed children between language ability and behavioral characteristics.

Corollary g. There is no significant relationship among emotionally disturbed children between different behavioral characteristics.

Corollary h. There is no significant relationship among emotionally disturbed children between age and other educationally relevant variables.

Method

The Gateway School in Orlando, Florida is a special public school for emotionally disturbed children and children with specific learning disabilities in the elementary grades. The two programs are housed within different sections of a single complex and are maintained separately.

The Gateway School was selected by the investigator as the site for the present study because all the elementary school age children, who have been diagnosed on the basis of educational and medical evaluations to be emotionally disturbed, and who are in special public school classes for such children in Orange County, attend classes at this location.

The subjects in this study were the 30 children ages 7-1 to 10-6 in the program for emotionally disturbed children. The younger children were chosen for investigation because the same instruments may be used for all the children at these levels in order to determine intelligence, achievement, language ability, and behavioral characteristics. The norms for the ITPA go only through age ten. The subjects in the present study were the 30 youngest school age children in public school classes for the emotionally disturbed in Orange County.

In order to test the hypotheses, the investigator went to Gateway School to collect the necessary data. Information pertaining to the children such as age, grade level, occupation of the breadwinner in the family was obtained from the school records, in talking with members of the school staff, and, when necessary, the child's family. The investigator then administered in the following order: the WISC, the PIAT, and the Auditory-Vocal Automatic, Auditory-Vocal Association, Auditory

Decoding and Vocal Encoding Subtests of the ITPA to each child. In the meantime each child's teacher completed the Behavioral Dimensions Rating Scale for him. Each test was administered on an individual basis. The entire data collection process was completed between February 14 and March 3, 1972.

Limitations of the Study

The subjects in the present study cannot be designated as being representative of all elementary school age children in special classes for the emotionally disturbed. Not only are not all grade levels included in this investigation, but different districts have different criteria for placement in these programs. In addition, for one reason or another several children who qualify for admissions to the program may not have been placed there. They could be attending a private institution or might have remained in their regular school. In other regions or under different circumstances these children might be in special public school classes for the emotionally disturbed.

Instrumentation

The Index of Status Characteristics is a combination of six factors pertaining to socioeconomic status used to predict social class participation (Warner, Meeker & Eells, 1960). The traits are occupation, amount of income, source of income, house type, dwelling area, and education. Individual characteristics or combinations of fewer than all six may serve as predictors. "If social class were

to be predicted on the basis of one status characteristic, the most accurate prediction would be obtained by basing it on occupation ..."(Warner et al., 1960, p. 168). The reliability of occupation as an indication of social class placement is .91 (Warner et al., 1960). Combinations of several characteristics always include occupation and always give occupation the highest weighting (Warner et al., 1960).

The Wechsler Intelligence Scale for Children (WISC) is an individually administered instrument which yields a Verbal IQ and a Performance IQ in addition to a Full Scale IQ. The reliability coefficients quoted for the WISC are .88 at age $7\frac{1}{2}$, .89 at $10\frac{1}{2}$, and .90 at $13\frac{1}{2}$ for the Performance Scale. These yield overall coefficients of .92, .95, and .94 respectively (Fraser, 1959). In many small-scale investigations it has been reported that the WISC and Stanford Binet correlate quite highly (.8+) "and differ little in their ability to predict academic attainment"(Fraser, 1959). " ... the test will probably satisfy the major requirements of internal consistency, reliability, and validity"(Patterson, 1959). In addition, the WISC is easy to give and the testing time varies much less than that for the Stanford Binet. The WISC has been found to be reliable when administered to emotionally disturbed children (Turner, Mathews, & Rachman, 1967).

Short forms of the WISC have been found to yield reliable results for emotionally disturbed children

(Enburg, Rowley & Stone, 1961; Yudin, 1966). For a sample of 145 children referred to the Child Psychiatry Service, Psychopathic Hospital, State University of Iowa, scaled scores for the various combinations of three, four, and five subtests were formed. They were then correlated with the total scaled sum for the entire battery, resulting in 582 correlations (Enburg et al., 1961). One of the four combinations of five subtests yielding the highest correlations (.96) found included the following: Information, Comprehension, Arithmetic, Picture Completion, and Block Design. This combination will be administered in the present study.

The Peabody Individual Achievement Test (PIAT) is a wide-range screening measure of achievement in Mathematics, Reading Recognition, Reading Comprehension, Spelling, and General Information. It was standardized from February 10 to May 15, 1969 on 200 children from each of 13 grade levels (Dunn & Markwardt, 1970). Norm tables are based on a standardization sample of 2,889 cases.

Reliability evidence was obtained by readministering the test to samples of 50 to 75 subjects each at the kindergarten, first-, third-, fifth-, eighth-, and twelfth-grade levels. The correlation coefficients varied from a low of .42 for kindergarten subjects in Spelling to a high of .94 for third-grade subjects in Reading Recognition, with an overall median of .78. However, .42 was substantially lower than the next lowest coefficient, .52 for mathematics

at the same level. "In terms of median values, greatest confidence can be placed in the stability of the Total Test (.89) and Reading Recognition (.89) and least in Reading Comprehension (.64) and Spelling (.65)" (Dunn & Markwardt, 1970, p. 44). The overall stability of scores in terms of median values was greatest at the first-, fifth- and eighth-grade levels (.80) and lowest at the kindergarten level. The discussion pertaining to the construction of the test indicated that it has content and item validity. Studies are needed to determine the degree of concurrent and predictive validity.

The Illinois Test of Psycholinguistic Abilities (ITPA) is a diagnostic instrument composed of 12 subtests. The battery taps the child's receptive and expressive language skills at the automatic, representational, and associational levels. The four subtests given in the present study are the Auditory Decoding, Vocal Encoding, Auditory-Vocal Association and Auditory-Vocal Automatic. They were chosen because collectively they seem best to assess the ability of a child to organize, understand, and express his ideas about familiar objects and situations in a meaningful way (McCarthy & Kirk, 1961). All four subtests have content validity and all except the Auditory-Vocal Automatic have constructive validity. The Auditory Decoding and Auditory-Vocal Association have qualified concurrent and predictive validity, whereas these are "questionable" for Vocal Encoding and "doubtful" for Auditory-Vocal Automatic (McCarthy & Kirk, 1963).

The ITPA has been administered to many different groups of normal and handicapped children. Test-retest reliability coefficients are presented below:

r	children	N	age	time lapse
.70	normal	69	6-7	3 months
.94	mentally retarded	29	7-10	9 months
.82	mentally retarded	32	7-10	3 months
.95	cerebral palsied	14	5-17	3 days

(McCarthy & Olson, 1964).

The Behavioral Dimensions Rating Scale (Brown & Bullock, 1970) was designed especially for the study by Bullock and Brown (1972) in order to determine behavioral patterns of emotionally disturbed children in special public school classes. The instrument consists of 24 pairs of adjectives referring to ways children act. The checklist was completed for 1086 children. Intercorrelations were computed on the items and a principal components factor solution was extracted. This was subjected to a varimax rotation and the four factor solution was selected. The items loading .50 or greater were chosen for each factor. The four factors were (1) aggressive/acting out, (2) withdrawn, (3) tense/anxious, and (4) irresponsible/inattentive.

Data Analysis

In order to arrive at the relationship specified in the hypotheses, Pearson Product-Moment correlations were computed between socioeconomic status and each of the educationally relevant variables and between the

educationally relevant variables to one another. The data analysis was done at the University of Florida Computing Center with the use of the UFSPLC20 program. Significance of the correlations was set at the .05 level. No cause-effect relationship was implied between the factors because correlations do not support inference of causality.

Significance

The present study extends the knowledge of the relationship of socioeconomic status to performance on specified educationally relevant variables to emotionally disturbed children. Studies along this line have been done with different groups of normal children in varied settings. Studies have also been done in the public schools with "school disordered" children and with children being considered for placement in special classes for the emotionally disturbed. No such study had yet been done with children who are already enrolled in special public school classes for the emotionally disturbed.

The information provided by this study will be useful to classroom teachers involved in designing instructional programs for emotionally disturbed children. The concomitance of socioeconomic status and specified educationally relevant variables and the concomitance of pairs of educationally relevant variables are factors which could be considered in curriculum planning. For example, as indicated by Cohen (1969), different methods of teaching reading have been found to be appropriate for children

from each of the socioeconomic levels. The teaching method most efficient for use with lower class children may not be the most efficient for upper class children. The relationship between socioeconomic status and the educationally relevant variables as well as the relationship between the variables to one another may have implications for designing the most desirable learning situations to meet different children's needs.

CHAPTER FOUR

RESULTS

The sample in the present study consisted of 30 children ages 7-1 to 10-6 enrolled at the Gateway School, Orlando, Florida, a special public school for the emotionally disturbed. Table 1 shows the distribution of the ratings of occupational levels of the children's families as determined by the revised occupational measure of the Warner Scale. Since the mean occupational level was 4.43, where level 1 indicates the highest socioeconomic status and level 7 indicates the lowest, it can be seen that the children

TABLE 1

Distribution of Rating of Occupational Levels as Determined by the Revised Occupational Measure of the Warner Scale

Occupational Level	Number of Children	
1 (highest)	4	
2	2	
3	1	
4	6	
5	7	
6	7	
7 (lowest)	3	
	N30	$\bar{X}$=4.43 s=1.84

were generally from lower class families on the basis of this instrument. They were also of significantly lower intelligence, had significantly lower achievement test

scores, and were of significantly lower language ability than would be expected of the normal population at comparable age levels. Evidence to this effect is provided in Tables 2, 3, and 4. In each instance, $\bar{x}$ represents the sample mean, u represents the population mean, s represents standard deviation, and n represents the number of children by age in the sample.

Table 2 provided a comparison by age level of the mean scaled scores on the WISC between the present sample and the standardization population. Although there were no

TABLE 2

A Comparison by Age Level of the Mean Scaled Scores Between the Present Sample of Children and the Standardization Population on Five Wechsler Intelligence Scale for Children Subtests: Information, Comprehension, Arithmetic, Picture Completion, Block Design

Age	$\bar{x}$	u	s	n	t	p
7	38	50	10.2	10	-3.8	.005
8	44	50	13.7	5	-1.0	N.S.
9	34	50	13.1	9	-3.7	.01
10	32	50	4.7	4	-7.7	.005

black children in the standardization population, there were several black children in the present sample. The difference between the intelligence level of the disturbed children and the standardization population was highly significant for children ages 7, 9, and 10.

A comparison by age level of the mean raw scores on the PIAT between the present sample of children and the standardization population is presented in Table 3.

TABLE 3

A Comparison by Age Level of the Mean Raw Scores Between the Present Sample of Children and the Standardization Population on the Peabody Individual Achievement Test

Age	$\bar{x}$	u	s	n	t	p
7	93	124	29.6	10	-3.3	.01
8	114	164	31.3	5	-3.4	.05
9	111	188	24.7	9	-9.3	.001
10	118	225	31.0	4	-6.9	.01

Significant differences between the two groups were found at all four age levels, the greatest significance being among nine-year-olds.

Table 4 shows a comparison by age level of the mean raw scores on the ITPA between the emotionally disturbed children and the standardization population. Significant differences were found for each age group, with the standardization population obtaining higher scores at all

TABLE 4

A Comparison by Age Level of the Mean Raw Scores Between the Present Sample of Children and the Standardization Population on Four Illinois Test of Psycholinguistic Abilities Subtests: Auditory-Vocal Automatic, Auditory-Vocal Association, Auditory Decoding, Vocal Encoding

Age	$\bar{x}$	u	s	n	t	p
7	88	115	27.7	10	-3.1	.05
8	92	127	12.3	5	-6.2	.005
9	96	141	35.5	9	-3.8	.01
10	100	148	25.7	4	-3.7	.05

levels. The difference found between the two groups of eight-year-olds was the most significant.

TABLE 5

Intercorrelation Matrix Between Socioeconomic Status and Educationally Relevant Variables and Between Educationally Relevant Variables to One Another

Code*	1	2	3	4	5	6	7	8	9
1	1.00	-0.18	-0.47[c]	-0.27	0.13	0.12	0.04	-0.02	0.23
2		1.00	0.79[a]	0.78[a]	-0.29	-0.14	-0.16	-0.12	0.19
3			1.00	0.82[a]	-0.39	-0.24	-0.18	-0.18	0.24
4				1.00	-0.33	-0.20	-0.13	-0.14	0.28
5					1.00	0.19	0.73[a]	0.76[a]	-0.12
6						1.00	0.10	0.19	-0.34
7							1.00	0.55[b]	-0.10
8								1.00	-0.34
9									1.00

Code* 1 - Age
2 - IQ
3 - Achievement
4 - Language
5 - Aggressive/Acting Out
6 - Withdrawn
7 - Tense/Anxious
8 - Irresponsible/Inattentive
9 - Socioeconomic Status

[a]Significant at $p > .001$
[b]Significant at $p > .005$
[c]Significant at $p > .05$

Reference will be made frequently on the following pages to the intercorrelation matrix presented in Table 5. Significant correlations between socioeconomic status and specified educationally relevant variables and between the variables to one another will be discussed in the subsequent section.

Discussion of the Findings by Hypotheses

Null Hypothesis I

H_0: It was stated that there is no significant difference among emotionally disturbed children between socioeconomic status and specified educationally relevant variables. No significant relationship was found; therefore, the Null Hypothesis was accepted. Whereas IQ, achievement, and language ability were positively related to socioeconomic status, the four behavioral characteristics were negatively related to it. Two of these, aggressive/acting out and tense/anxious, were significant at the 10 percent level of confidence.

Corollary a. Table 6 shows the distribution of scaled scores as determined by the Information, Comprehension, Arithmetic, Picture Completion and Block Design Subtests of the WISC. A scaled score of 50 indicates average intellectual functioning, since the scaled scores have been derived so as to provide at each age and for each separate subtest a mean of 10. Only three children in the sample demonstrated above average intelligence. No statistically significant relationship was found between

TABLE 6

Distribution of Scaled Scores Obtained on Five Wechsler Intelligence Scale for Children Subtests: Information, Comprehension, Arithmetic, Picture Completion, Block Design

Scaled Scores	Number of Children	
66-70	1	
61-65	0	
56-60	1	
51-55	1	
46-50	2	
41-45	6	
36-40	5	
31-35	4	
26-30	2	
21-25	5	
below 21	1	
	N28	$\bar{X}$=36.86 s=12.11

the socioeconomic status of emotionally disturbed children and intelligence. Corollary a was therefore accepted.

Corollary b. Table 7 shows the distribution of

TABLE 7

Distribution of Standard Scores Obtained on the Peabody Individual Achievement Test

Standard Scores	Number of Children	
100-104	4	
95-99	1	
90-94	1	
85-89	1	
80-84	8	
75-79	4	
70-74	1	
65-69	3	
below 65	5	
	N28	$\bar{X}$=78.50 s=15.23

standard scores obtained on the Arithmetic, Reading Recognition, Reading Comprehension, Spelling, and General Information Subtests of the PIAT. A percentile rank of 50 corresponds to a standard score of 100. Only four children in the sample obtained a standard score of 100 or above, with the highest standard score obtained being 103. This corresponds to a percentile rank of 58. Five children were below the first percentile based on the standardization population. Since no statistically significant relationship was found between the socioeconomic status of emotionally disturbed children and achievement, Corollary b was accepted.

TABLE 8

Distribution of Scaled Scores Obtained on Four Illinois Test of Psycholinguistic Abilities Subtests: Auditory-Vocal Automatic, Auditory-Vocal Association, Auditory Decoding, Vocal Encoding

Scaled Scores	Number of Children
160-169	1
150-159	1
140-149	2
130-139	1
120-129	4
110-119	6
100-109	4
90-99	3
80-89	4
below 80	2
	N28 $\bar{x}$=109.82 s= 26.42

Corollary c. The distribution of scaled scores obtained on the Auditory-Vocal Automatic, Auditory-Vocal

Association, Auditory Decoding, and Vocal Encoding Subtests of the ITPA is illustrated on Table 8. A scaled score of 144 indicates average language ability since the scaled scores have been derived so as to provide for each separate subtest a mean of 36. Three of the disturbed children had scores at or above this level. Corollary c was accepted because no significant relationship was found between the socioeconomic status of emotionally disturbed children and language ability.

Corollary d. The degree and distribution of the following behaviors as measured by the Behavioral Dimensions Rating Scale are presented in Table 9: aggressive/acting out, withdrawn, tense/anxious, and irresponsible/inattentive. The instrument reflects the degree of the four characteristics as seen by the child's teacher. Aggressive/acting out behavior is characterized by fighting, threatening, and hurting others, as well as by being destructive and disruptive. Withdrawn refers to a child who is shy, passive, timid, and quiet, and who typically plays alone. Tense/anxious behavior, as factored out with this scale, has no other concomitant problems. The irresponsible/inattentive pattern of interaction is related to rule breaking which may account for a child's inability to meet situational expectations (Bullock & Brown, 1972; Brown & Bullock, 1972). The range of possible scores on the aggressive/acting out dimension is 9 to 63 with 9 indicating

TABLE 9

Degree and Distribution of the Following Behaviors as Measured by the Behavioral Dimensions Rating Scale: Aggressive/Acting Out, Withdrawn, Tense/Anxious, Irresponsible/Inattentive

Range	Aggressive/ Acting Out	Withdrawn	Tense/ Anxious	Irresponsible/ Inattentive
60-64	1	-	-	-
55-59	0	0	-	-
50-54	3	0	-	-
45-49	5	0	-	-
40-44	5	0	-	-
35-39	2	7	-	-
30-34	4	7	-	-
25-29	2	7	-	-
20-24	2	5	-	1
15-19	4	1	-	7
10-14	1	1	20	12
5-9	0	1	8	6
0-4	0	0	1	3
	N29	N29	N29	N29
	$\bar{x}$=36.00	$\bar{x}$=28.45	$\bar{x}$=9.83	$\bar{x}$=11.55
	s=13.36	s= 7.19	s=2.24	s= 4.58

the lowest degree of this trait. The range of possible scores for withdrawn behavior is 8 to 56 with 8 implying the lowest degree of this behavior. The range of possible scores on the tense/anxious dimension is 2 to 14 and the range on the irresponsible/inattentive characteristic is 3 to 21. No statistically significant relationship was found between the socioeconomic status of emotionally disturbed children and behavioral characteristics. Corollary d was therefore accepted.

Null Hypothesis II

H_o: It was stated that there is no significant relationship among emotionally disturbed children between

pairs of specified educationally relevant variables. Since several significant correlations were found, the Null Hypothesis was rejected.

Corollary a. A correlation of 0.79 was obtained among the emotionally disturbed children between intelligence and achievement. Since this is significant beyond the .001 level of confidence, Corollary a was rejected.

Corollary b. A correlation of 0.78, significant beyond the .001 level of confidence, was found between intelligence and language ability of emotionally disturbed children. Corollary b was therefore rejected.

Corollary c. There was no statistically significant relationship among emotionally disturbed children between intelligence and behavioral characteristics; therefore Corollary c was accepted.

Corollary d. A correlation of 0.82 was obtained among emotionally disturbed children between achievement and language ability. Since this is significant beyond the .001 level of confidence, Corollary d was rejected.

Corollary e. A correlation of -0.39, significant at the .05 level of confidence, was found among the emotionally disturbed children between achievement and aggressive/acting out behavior. Corollary e was therefore rejected.

Corollary f. No significant relationship was found among emotionally disturbed children between language ability and behavioral characteristics; therefore, Corollary f was rejected.

Corollary g. There were several significant relationships among emotionally disturbed children between different behavioral characteristics. Two correlations were significant beyond the .001 level of confidence. The correlation between aggressive/acting out behavior and tense/anxious behavior was 0.73 and the correlation between aggressive/acting out behavior and irresponsible/inattentive behavior was 0.76. A correlation of 0.55, significant at the .005 level of confidence, was obtained between tense/anxious and irresponsible/inattentive behavior. In view of these findings, Corollary g was rejected.

Corollary h. A correlation of -0.47 was found among emotionally disturbed children between age and achievement. This is significant at the .05 level of confidence and implies that the older these children are, the further behind they tend to be in academic performance. Corollary h was rejected.

CHAPTER FIVE

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

The findings of the study have shown that among the present sample of emotionally disturbed children, intelligence, achievement, language ability and behavioral characteristics were not significantly related to the socioeconomic status of the children's families. Since, however, intelligence, achievement, and language ability were positively related to socioeconomic status and the four behavioral characteristics were negatively related to it, further investigation of the relationship between these variables with emotionally disturbed children of different age levels in a variety of educational settings would be in order.

The highly significant correlations between intelligence, achievement, and language ability might have been anticipated in view of the fact that the three instruments used to measure these variables have a great deal of commonality in terms of information sought. The significant negative correlation between achievement and aggressive/acting out behavior indicates that the higher the child's academic achievement, the less aggressive he tends to be. This result supports the evidence provided by Graubard (1971).

He reported that among emotionally disturbed boys ages 9-14, the greatest amount of academic retardation is exhibited by the conduct problem child. A major finding of the present study is the relationship between academic achievement and aggressive/acting out behavior. The negative correlation implies the need for children to achieve and the possibility of utilizing achievement experiences as a means toward changing and ameliorating inappropriate behavior. No cause-effect relationship was postulated by the correlations in the current investigation because it was not an experimental study; however, the fact that children, whose achievement is more commensurate with their age level, tend to be less aggressive presents the possibility that the manipulation of achievement may have bearing upon the degree of a child's aggression. The vast ramifications this could have for the efficient management of, and remediation procedures with, emotionally disturbed children in order that they might function optimally in the regular educational mainstream are evident. Successful academic performance could become the major therapeutic technique used to ameliorate the behavior problems of emotionally disturbed children. This treatment method could be extended to children in general.

Among the many studies cited in Chapter Two regarding the academic achievement and behavioral characteristics of normal children, both lower academic achievement and a greater propensity toward aggressive behavior were

generally found among normal children of lower socio-economic status. Perhaps if instruments other than the occupational measure of the Warner Scale were used to determine the socioeconomic status of emotionally disturbed children in special public school classes, similar findings would be obtained.

The highly significant correlations between aggressive/acting out behavior and both tense/anxious behavior and irresponsible/inattentive behavior and between the latter two characteristics to one another support the findings of Bullock and Brown (1972) that there is a great tendency for these traits to occur together. A most interesting factor observed in the results is that each of the four behavioral characteristics in question was negatively related to intelligence, achievement, and language ability. Stated more precisely, the higher a child's performance on the WISC, PIAT, and ITPA, the lower his tendency to be aggressive/acting out, withdrawn, tense/anxious, or irresponsible/inattentive. Furthermore, the behavioral characteristics were positively related to one another; more specifically, as a child exhibits more of one characteristic the tendency is that he will exhibit more of the other three. Additional studies must be done with emotionally disturbed children of different age levels in a variety of educational settings in order to determine whether these findings are consistent.

The significant correlation between age and academic

achievement lends support to the findings of Stennett (1966) who stated that emotionally disturbed children fall further and further behind their peers as they progress through the elementary grades. This factor has implications for the importance of early identification and appropriate remedial instruction techniques with the disturbed school age population.

Recommendations

Recommendations for Classroom Teachers

The academic performance of the emotionally disturbed children in the present study indicates that they are far behind their regular class peers in terms of achievement. In view of the findings of this investigation, the following recommendations would seem to be in order for classroom teachers:

1. There is an urgent need for proper interpretation on the part of classroom teachers of diagnostic evaluations of their pupils and the appropriate implementation of sequential remedial instruction techniques in order to enable these children to overcome their academic deficits. Teachers must be able to understand as well as apply the information provided by diagnostic instruments to help assure that the most efficient educational plans for each child be carried out.
2. Since academic achievement has been shown to correlate negatively with aggressive behavior, teachers might well consider the implications

of this relationship in planning instructional programs to meet different children's needs.

Recommendations for Researchers

It would be valuable for researchers to reproduce this study with larger and different groups of emotionally disturbed children of various ages in order to determine whether the relationships found with the present sample may be generalized to a greater proportion of the population. The following recommendations are in order for researchers:

1. Further investigation should be done regarding the relationship of socioeconomic status and educationally relevant variables utilizing a variety of measures of each factor so that it may be established whether socioeconomic status is always positively related to intelligence, achievement, and language ability and always negatively related to the four behavioral characteristics investigated in the present study, and if these relationships become significant with larger samples.
2. A similar effort should be made in order to determine whether intelligence, achievement, and language ability are always negatively correlated with the four behavioral characteristics, and with which groups the correlations may be significant. The results of these studies may have implications for classroom teachers in terms of efficient programing for emotionally

disturbed children.

3. In view of the fact that a rating scale was used in the present investigation, further study is needed regarding the correlations between behavior patterns of emotionally disturbed children in order to determine whether children actually demonstrate these behaviors or whether a cultural stereotype is influencing the teachers' ratings.

REFERENCES

Anderson, W. F. Relation of Lorge-Thorndike Intelligence Test scores of public school pupils to the socio-economic status of their parents. Journal of Experimental Education, 1962, 31, 73-76.

Baker, J. K., & Wagner, N. N. Social class and mental illness in children. Teachers College Record, 1965, 66, 522-535.

Bernstein, B. Language and social class. British Journal of Sociology, 1960, 11, 271-276.

Bernstein, B. Social class and linguistic development: A theory in social learning of education, economy and society. New York: The Free Press, 1961.

Brown, R. K., & Bullock, L. M. Behavioral patterns of emotionally disturbed children as assessed by the Behavioral Dimensions Rating Scale. Mimeographed pamphlet, 1972.

Brown, R. K., & Bullock L. M. Behavioral Dimensions Rating Scale. Mimeographed pamphlet, 1970.

Bruck, M., & Bodwin, R. F. The relationship between self-concept and the presence and absence of scholastic under-achievement. Journal of Clinical Psychology, 1962, 18, 181-182.

Buder, L. Fifth of city pupils found two years behind in reading. The New York Times, December 23, 1966, N.Y.

Bullock, L. M., & Brown, R. K. Educational provisions for emotionally disturbed children: A status report. Florida Educational Research Development Commission, 1972.

Bullock, L. M., & Brown, R. K. Behavioral dimensions of emotionally disturbed children. Exceptional Children, 1972, 38, 740-742.

Burchinal, L., Gardner, B., & Hawkes, G. R. Children's personality adjustment and the socioeconomic status of their families. Journal of Genetic Psychology, 1958, 92, 149-159.

Burnes, K. Patterns of WISC scores for children of two socioeconomic classes and races. Child Development, 1970, 41, 493-499.

Camp, B. W. WISC performance in acting out and delinquent children with and without EEG abnormality. Journal of Consulting Psychology, 1966, 30, 350-353.

Chandler, T. Reading disability and socio-economic status. Journal of Reading, 1966, 10, 5-21.

Chase, C. I., & Pugh, R. C. Social class and performance on an intelligence test. Indiana University, Bloomington, 1970, 9 p. Microfiche No. ED 038-678.

Cleveland, G. A., & Bosworth, D. L. A study of certain psychological and sociological characteristics as related to arithmetic achievement. The Arithmetic Teacher, 1967, 14, 383-387.

Cohen, S. A. Teach them all to read: Theory, methods, and materials for teaching the disadvantaged. New York: Random House, 1969.

Crocket, W. H. Effects of age, social status, sex and race upon the understanding of word meanings independent of sentence context. Clark University, Worchester, Mass., 1966, 37p. Microfiche No. Ed 010-381.

Curry, R. L. The effect of socio-economic status on the scholastic achievement of sixth-grade children. British Journal of Educational Psychology, 1962, 32, 46-49.

Davis, A. Social class influence upon learning. Cambridge: Harvard University Press, 1948.

Deutsch, M. Minority group and class status as related to social and personality factors in scholastic achievement. Society for Applied Anthropology Monograph, 1960, No. 2.

Deutsch, M. The disadvantaged child and the learning process. In A. H. Passon (Ed.), Education in depressed areas. New York: Bureau of Publications, Teachers College, Columbia University, 1963.

Deutsch, M., & Brown, B. Social influences in Negro-white intelligence differences. Journal of Social Issues, 1964, 20, 24-35.

Dinitz, S., Kay, B., & Reckless, W. C. Delinquency proneness and school achievement. Education Research Bulletin, 1957, 36, 131-136.

Dinitz, S., Kay, B., & Reckless, W. C. Croup gradients in delinquency potential and achievement scores of sixth graders. American Journal of Orthopsychiatry, 1958, 28, 598-605.

Dunn, L. M., & Markwardt, F. C., Jr. Peabody Individual Achievement Test. Circle Pines, Minnesota: American Guidance Company, 1964.

Enburg, R., Rowley, V. N., & Stone, B. Short forms of the WISC for use with emotionally disturbed children. Journal of Clinical Psychology, 1961, 17, 280-286.

Estes, B. W. Influence of socioeconomic status on Wechsler Intelligence Scale for Children: An exploratory study. Journal of Consulting Psychology, 1953, 17, 58-62.

Fisher, G. Discrepancy in verbal and performance I.Q. in adolescent sociopaths. Journal of Clinical Psychology, 1961, 17, 60.

Foster, A. L. A note concerning the intelligence of delinquents. Journal of Clinical Psychology, 1959, 15, 78-79.

Fraser, E. D. The Wechsler Intelligence Scale for Children. In O. K. Buros (Ed.), Fifth Mental Measurements Yearbook. Highland Park, New Jersey: The Gryphon Press, 1959, 558-559.

Gildea, M. C. L., Glidwell, J. C., & Kantor, M. B. Maternal attitudes and general adjustment in school children. In J. C. Glidwell (Ed.), Parental attitudes and child behavior. Springfield, Ill.: Charles C. Thomas, 1961.

Goldstein, A. Aggression and hostility in the elementary school in low socioeconomic areas. Understanding the Child, 1955, 24, 20-21.

Goldstein, K. M., Cary, G. L., Chorost, S. B., & Dalack, J. D. Family patterns and the school performance of emotionally disturbed boys. Journal of Learning Disabilities, 1970, 3, 10-15.

Gough, H. G. The relationship of socio-economic status to personality inventory and achievement test scores. Journal of Educational Psychology, 1946, 37, 524-540.

Granzow, K. R. A comparative study of underachievers, normal achievers and overachievers in reading. Dissertation Abstracts, 1954, 14, 631-632. (Abstract)

Graubard, P. S. The extent of academic retardation in a residential treatment center. Journal of Educational Research, 1964, 58, 78-80.

Graubard, P. S. Psycholinguistic correlates of reading disability in disturbed delinquent children. Journal of Special Education, 1967, 1, 363-368.

Graubard, P. S. The relationship between academic achievement and behavioral dimensions. Exceptional Children, 1971, 37, 755-757.

Hanson, E., & Robinson, A. H. Reading readiness and achievement of primary grade children of different socio-economic strata. The Reading Teacher, 1967, 21, 52-57.

Haring, N. The emotionally disturbed. In S. A. Kirk & B. B. Weiner (Eds.), Behavioral research on exceptional children. Washington, D. C.: Council for Exceptional Children, 1963.

Harris, I. Emotional blocks to learning. New York: Free Press of Glencoe, 1961.

Havighurst, R. J. Poor reading and delinquency may go hand in hand. Nation's Schools, 1959, 64, 55-58.

Havighurst, R. J., & Janke, L. L. Relations between ability and social status in a midwestern community, I: Ten-year-old children. Journal of Educational Psychology, 1944, 35, 357-368.

Heber, R. The relationship of intelligence and physical maturity to the social status of children. Journal of Educational Psychology, 1956, 47, 158-162.

Heintz, E. Adjustment problems of social class. The Phi Delta Kappan, 1949, 30, 290-293.

Hill, E. H., & Giammatteo, M. C. Socio-economic status and its relationship to school achievement in the elementary school. Elementary English, 1963, 40, 265-270.

Hollingshead, A. B., & Redlich, F. C. Social class and mental illness. New York: Wiley and Sons, 1958.

Howard, M. J., Hoops, H. R., & McKinnon, A. J. Language abilities of children with differing socioeconomic backgrounds. Journal of Learning Disabilities, 1970, 3 (6), 32-39.

Hunt, J. McV. Intelligence and experience. New York: Ronald Press, 1961.

Hunt, R. G., Roach, J. L., & Gurrslin, O. Social-psychological factors and the psychiatric complaints of disturbed children. Journal of Consulting Psychology, 1960, 24, 194.

Keough, J. J. The relationship of socio-economic factors and achievement in arithmetic. The Arithmetic Teacher, 1960, 7, 231-237.

Klineberg, O. Negro-white differences in intelligence test performance: A new look at an old problem. American Psychology, 1963, 18, 198-203.

Kvaraceus, W. C. Juvenile delinquency and social class. Journal of Educational Sociology, 1944, 18, 51-54.

Laird, D. S. The performance of two groups of eleven-year-old boys on the Wechsler Intelligence Scale for Children. Journal of Educational Research, 1957, 51, 101-107.

Loban, W. D. The language of elementary school children. Research Report, No. 1. Champaign, Illinois: National Council of Teachers of English, 1963.

Loevinger, J. Intelligence as related to socioeconomic factors. Intelligence, its nature and nurture. Thirty-Ninth Yearbook. National Society for the Study of Education, Part I. Bloomington, Illinois: Public School Publishing Company, 1940, 159-210.

Lovell, K., & Woolsey, M. E. Reading disability, non-verbal reasoning, and social class. Educational Research, 1964, 6, 226-229.

Maddy, N. R. Comparison of children's personality traits, attitudes, and intelligence with parental occupation. Genetic Psychology Monograph, 1943, 27, 3-63.

Margolin, J. B., Roman, M., & Harari, C. Reading disability in the delinquent child: A microcosm of psychosocial pathology. American Journal of Orthopsychiatry, 1955, 25, 25-35.

McCarthy, D. Language development in children. In L. Carmichael (Ed.), A manual of child psychology. New York: John Wiley and Sons, 1954.

McCarthy, J. J., & Kirk, S. A. Illinois Test of Psycholinguistic Abilities. Champaign, Illinois: University of Illinois, 1961.

McCarthy, J. J., & Kirk, S. A. The construction, standardization, and statistical characteristics of the Illinois Test of Psycholinguistic Abilities. Urbana: University of Illinois Press, 1963.

McCarthy, J. J., & Kirk, S. A. The Illinois Test of Psycholinguistic Abilities. (Rev. Ed.) Urbana: University of Illinois Press, 1968.

McCarthy, J. J., & Olson, J. L. Validity studies of the Illinois Test of Psycholinguistic Abilities. Milwaukee, Wisconsin: Authors, 1964.

McDermott, J. F., Harrison, S. K., Schrager, J., & Wilson, P. Social class and mental illness in children: Observations of blue collar families. American Journal of Orthopsychiatry, 1965, 35, 500-508.

McKee, J. P., & Leader, F. B. The relationship of socio-economic status and aggression to the competitive behavior of school children. Child Development, 1955, 26, 135-142.

Miller, G. W. Factors in school achievement and social class. Journal of Educational Psychology, 1970, 61, 260-269.

Miller, W. H. An examination of children's daily schedules in three social classes and their relation to first grade reading achievement. California Journal of Educational Research, 1970, 21, 100-110.

Milner, E. A study of the relationship between reading readiness in grade one school children and patterns of parent-child interaction. Child Development, 1951, 22, 93-112.

Minuchin, S., Chamberlain, P., & Graubard, P. A project to teach learning skills to disturbed, delinquent children. American Journal of Orthopsychiatry, 1967, 37, 558-567.

Mitchell, J. V., Jr. A comparison of the factorial structure of cognitive functions for a high and low status group. Journal of Educational Psychology, 1956, 47, 397-414.

Montague, D. O. Arithmetic concepts of kindergarten children in contrasting socioeconomic areas. Elementary School Journal, 1964, 64, 393-397.

Morse, W. C., Cutler, R. L., & Fink, A. H. Public school classes for the emotionally handicapped: A research analysis. Washington, D. C.: Council for Exceptional Children, 1964.

Mortenson, P. Selected pre-reading tasks, socio-economic status, and sex. The Reading Teacher, 1968, 22, 45-49.

Motto, J. J., & Lathan, L. An analysis of children's educational achievement and related variables in a state psychiatric hospital. Exceptional Children, 1966, 32, 619-623.

Motto, J. J., & Wilkins, G. S. Educational achievement of institutionalized emotionally disturbed children. Journal of Educational Research, 1968, 61, 218-221.

Oakland, R. D. Auditory discrimination and socioeconomic status as correlates of reading ability. Journal of Learning Disabilities, 1969, 2, 324-329.

Pasamaneck, B., & Knoblock, H. The contribution of some organic factors to school retardation in Negro children. Journal of Negro Education, 1958, 27, 4-9.

Passy, R. A. Socio-economic status and mathematics achievement. The Arithmetic Teacher, 1964, 11, 469-470.

Patterson, C. R. The Wechsler Intelligence Scale for Children. In O. K. Buros (Ed.), Fifth Mental Measurements Yearbook. Highland Park, New Jersey: The Gryphon Press, 1959, 559-560.

Pattison, S. J., & Fielder, W. R. Social class and number concepts among young children. California Journal of Educational Research, 1969, 20, 75-84.

Peterson, D. Behavior problems of middle childhood. Journal of Consulting Psychology, 1961, 25, 205-209.

Phillips, B. Sex, social class, and anxiety as sources of variation in school achievement. Journal of Educational Psychology, 1962, 53, 316-322.

Pisula, C. Behavior problems of children from high and low socioeconomic groups. Mental Hygiene, 1937, 21, 452-455.

Quay, H. C. The delinquent. In S. A. Kirk & B. B. Weiner (Eds.), Behavior research on exceptional children. Washington, D. C.: Council for Exceptional Children, 1963.

Quay, H. C., Morse, W. C., & Cutler, R. L. Personality patterns of pupils in special classes for the emotionally disturbed. Exceptional Children, 1966, 32, 297-301.

Reid, W. R., & Schoer, L. A. Reading achievement, social class and subtest pattern on the WISC. Journal of Educational Research, 1966, 59, 469-472.

Roberts, S. C., Bullock, L. M., & Brown, R. K. Educational provisions and potential and actual instructional levels of emotionally disturbed children: A comparison. Submitted for publication, 1972.

Robins, L. N. Deviant children grown up. Baltimore, Maryland: The Williams and Wilkins Company, 1966.

Ryckman, D. B. A comparison of information processing abilities of middle and lower class kindergarten boys. Exceptional Children, 1967, 33, 545-552.

Schmuck, R. A., & Schmuck, R. W. Upward mobility and I.Q. performance. Journal of Educational Research, 1961, 55, 123-127.

Schroeder, L. B. A study between the relationships of five descriptive categories of emotional disturbance and reading and arithmetic behavior. Exceptional Children, 1965, 32, 111-112.

Schwebel, A. I., & Bernstein, A. J. The effects of impulsivity on the performance of lower-class children on four WISC subtests. American Journal of Orthopsychiatry, 1970, 40, 629-636.

Sewell, W. H., & Ellenbogen, B. L. Social status and the measured intelligence of small city and rural children. American Sociological Review, 1952, 17, 612-616.

Sewell, W. H., & Haller, A. O. Factors in the relationship between social status and the personality adjustment of the child. American Sociological Review, 1959, 24, 511-520.

Sexton, P. Education and income: Inequalities of income in our public schools. New York: Viking Press, 1961.

Shaw, D. C. The relation of socioeconomic status to educational achievement in grades four to eight. Journal of Educational Research, 1943, 37, 197-201.

Shimota, H. E. Reading skills in emotionally disturbed institutionalized adolescents. Journal of Educational Research, 1964, 58, 106-111.

Stennett, R. G. Emotional handicap in the elementary years: Phase or disease. American Journal of Orthopsychiatry, 1966, 36, 444-448.

Stone, F. B., & Rowley, V. N. Educational disability in emotionally disturbed children. Exceptional Children, 1964, 30, 423-426.

Tamkin, A. S. A survey of educational disability in emotionally disturbed children. Journal of Educational Research, 1960, 54, 67-69.

Templin, M. C. Certain language skills in children: Their development and interrelationships. Minneapolis, Minn.: University of Minnesota Press, 1957.

Toigo, R. Social status and schoolroom aggression in third-grade children. Genetic Psychology Monograph, 1965, 71, 221-268.

Turner, R. K., Mathews, A., & Rachman, S. The stability of the WISC in a psychiatric group. British Journal of Educational Psychology, 1967, 37, 194-199.

Uhl, N. P., & Nurss, J. R. Socio-economic level styles in solving reading-related tasks. Reading Research Quarterly, 1970, 5, 452-485.

Unkel, E. A study of the interaction of socio-economic groups and sex factors with the discrepancy between anticipated achievement and actual achievement in elementary school mathematics. The Arithmetic Teacher, 1966, 13, 662-670.

Warner, W. L., Meeker, M., & Eells, K. Social class in America. New York: Harper & Row, 1960.

Wechsler, D. Wechsler Intelligence Scale for Children. New York: Psychological Corporation, 1949.

Westman, J. C., Rice, D. L., & Berman, E. Nursery school behavior and later school adjustment. American Journal of Orthopsychiatry, 1967, 37, 725-731.

White, M. A., & Charry, J. (Eds.) School disorder, intelligence, and social class. New York: Teachers College Press, 1966.

Whiteman, M., & Deutsch, M. Social disadvantage as related to intellective and language development. In M. Deutsch, I. Katz, & A. R. Jensen (Eds.), Social class, race, and psychological development. New York: Holt, Rinehart, and Winston, 1968.

Wolf, M. G. Emotional disturbance and school achievement. Journal of School Psychology, 1965, 4, 16-18.

Worley, S. E., & Story, W. E. Socioeconomic status and language facility of beginning first graders. The Reading Teacher, 1967, 20, 400-403.

Yudin, L. W. An abbreviated form of the WISC for use with emotionally disturbed children. Journal of Consulting Psychology, 1966, 30, 272-275.

VITA

The author was born in New York City on June 20, 1945. Her undergraduate training, completed at Rollins College, Winter Park, Florida, led to the awarding of a Bachelor of Arts degree in June 1966. Subsequent to her graduation, the author started taking courses toward certification in the area of intellectual disabilities. During the school years 1966-1967 and 1967-1968 she taught trainable mentally retarded children at the Pine Grove School in Rockledge, Florida, became certified in intellectual disabilities, and began graduate work in mental retardation at the University of South Florida, Tampa. In August 1968 she was appointed Curriculum Coordinator for Exceptional Education in Brevard County, Florida, a position which she held during the 1968-1969 and 1969-1970 school years. She received a Master of Arts degree in August 1969. In the fall of 1970 she was awarded a post-master's fellowship for full time graduate study at the doctoral level at the University of Florida in emotional disturbance. A second such fellowship was awarded in the fall of 1971.

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.

William R. Reid, Chairman
Professor of Special Education

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.

Lyndal M. Bullock, Co-Chairman
Assistant Professor of
Special Education

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.

William D. Wolking
Associate Professor of
Special Education

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.

Harold R. Hunter
Assistant Professor of Sociology

This dissertation was submitted to the Dean of the College of Education and to the Graduate Council, and was accepted as partial fulfillment of the requirements for the degree of Doctor of Philosophy.

August, 1972

B. J. Shaw by M C Butler
Dean, College of Education

Dean, Graduate School